

## CLAIMS

Therefore, the following is claimed:

- 1           1.     ~~A digital subscriber line (DSL) communication device, comprising:~~  
2                     ~~a receiver for developing a received signal; and~~  
3                     ~~a digital signal processor (DSP) configured to perform layer two error~~  
4           ~~detection by computing a frame check sequence (FCS) on each frame of said received~~  
5           ~~signal.~~
- 1           2.     The apparatus as defined in claim 1, further comprising means for saving  
2           the adaptive parameters of an adaptive device located within said receiver, and calculated  
3           by said DSP, if said frame check sequence indicates that said received signal is error free.
- 1           3.     The apparatus as defined in claim 1, further comprising means for using  
2           existing parameters of an adaptive device located within said receiver if said frame check  
3           sequence indicates that said received signal contains errors.
- 1           4.     The apparatus as defined in claim 1, wherein said DSL device operates in  
2           a multipoint environment.
- 1           5.     The apparatus as defined in claim 1, wherein said DSL device operates in  
2           a half duplex environment.
- 1           6.     The apparatus as defined in claim 1, wherein said DSL device operates in  
2           a full duplex environment.

1           7.       The apparatus as defined in claim 1, wherein said DSL device operates in  
2 an asymmetrical duplex environment.

1           8.       The apparatus as defined in claim 1, wherein said layer two error detection  
2 resides in layer one of the OSI seven layer model.

1           9.       The apparatus as defined in claim 2, wherein said means for saving the  
2 adaptive parameters of an adaptive device located within said receiver resides in layer one  
3 of the OSI seven layer model.

1           10.      A method for updating adaptive parameters in a digital subscriber line  
2 (DSL) communication device, comprising the steps of:  
3                   developing, in a receiver, a received signal; and  
4                   performing, in a digital signal processor (DSP), layer two error detection  
5 by computing a frame check sequence (FCS) on each frame of said received signal.

1           11.      The method as defined in claim 10, further comprising the step of saving  
2 the adaptive parameters of an adaptive device located within said receiver and calculated  
3 by said DSP if said frame check sequence indicates that said received signal is error free.

1           12.      The method as defined in claim 10, further comprising the step of using  
2 existing parameters of an adaptive device located within said receiver if said frame check  
3 sequence indicates that said received signal contains errors.

1           13.      The method as defined in claim 10, wherein said DSL device operates in a  
2 multipoint environment.

1 14. The method as defined in claim 10, wherein said DSL device operates in a  
2 half duplex environment.

1 15. The method as defined in claim 10, wherein said DSL device operates in a  
2 full duplex environment.

1 16. The method as defined in claim 10, wherein said DSL device operates in  
2 an asymmetrical duplex environment.

1 17. The method as defined in claim 10, wherein said step of performing layer  
2 two error detection occurs in layer one of the OSI seven layer model.

1 18. The method as defined in claim 11, wherein said step of saving the  
2 adaptive parameters of an adaptive device located within said receiver occurs in layer one  
3 of the OSI seven layer model.

1 19. A computer readable medium having a program for updating adaptive  
2 parameters in a digital subscriber line (DSL) communication device, the program  
3 comprising:  
4 means for developing, in a receiver, a received signal; and  
5 means for performing, in a digital signal processor (DSP), layer two error  
6 detection by computing a frame check sequence (FCS) on each frame of said received  
7 ~~signal.~~

1 20. The program as defined in claim 19, further comprising means for saving  
2 the adaptive parameters of an adaptive device located within said receiver and calculated  
3 by said DSP if said frame check sequence indicates that said received signal is error free.

21. The program as defined in claim 19, further comprising means for using existing parameters of an adaptive device located within said receiver if said frame check sequence indicates that said received signal contains errors.

1           22.     The program as defined in claim 19, wherein said DSL device operates in  
2     a multipoint environment.

1           23.     The program as defined in claim 19, wherein said DSL device operates in  
2     a half duplex environment.

1           24.     The program as defined in claim 19, wherein said DSL device operates in  
2     a full duplex environment.

1           25.     The program as defined in claim 19, wherein said DSL device operates in  
2     an asymmetrical duplex environment.

1           26.     The program as defined in claim 19, wherein said means for performing  
2     layer two error detection occurs in layer one of the OSI seven layer model.

27. The program as defined in claim 20, wherein said means for saving the adaptive parameters of an adaptive device located within said receiver occurs in layer one of the OSI seven layer model.

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